

WHAT IS CLAIMED IS:

1           1. A method for controlling a transmission capacity for  
2 allocating efficiently the transmission capacity on a wired line  
3 in every call in a data communication wherein said data  
4 communication relates to a mobile communication system in which  
5 data is transmitted in a wireless line and said wired line in  
6 accordance with a packet system, comprising the steps of:

7           measuring an practical transmission speed of said data on  
8 said wireless line in said every call;

9           determining said transmission capacity that is required for  
10 transmitting said data at said transmission speed through said  
11 wired line at the minimum level in said every call as a target  
12 transmission capacity;

13           decreasing a permissible transmission capacity in the case  
14 where said permissible transmission capacity that is usable for  
15 transmission of said data through said wired line and determined  
16 in said every call is larger than said target transmission  
17 capacity; and

18           increasing the permissible transmission capacity in the  
19 case where said permissible transmission capacity is smaller  
20 than said target transmission capacity;

21           whereby a transmission speed of said data in said wired line  
22 being controlled so as to be equal to or less than said permissible  
23 transmission capacity.

1           2. A method for controlling a transmission capacity  
2 for allocating efficiently the transmission capacity on a wired

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3 line in every call in a data communication wherein said data  
4 communication relates to a mobile communication system in which  
5 data is transmitted in a wireless line and said wired line in  
6 accordance with a packet system, comprising the steps of:

7 measuring an practical transmission speed of said data on  
8 said wireless line in said every call;

9 determining said transmission capacity that is required for  
10 transmitting said data at said transmission speed through said  
11 wired line at the minimum level in said every call as a target  
12 transmission capacity;

13 decreasing a permissible transmission capacity in the case  
14 where a difference between said permissible transmission  
15 capacity usable for transmission of said data through said wired  
16 line, which is determined in said every call, and said target  
17 transmission capacity is smaller than a predetermined first  
18 threshold; and

19 increasing the permissible transmission capacity in the  
20 case where a difference between said permissible transmission  
21 capacity and said target transmission capacity is larger than  
22 a predetermined second threshold;

23 whereby a transmission speed of said data in said wired line  
24 being controlled so as to be equal to or less than said permissible  
25 transmission capacity.

1 3. A method for controlling a transmission capacity as  
2 claimed in claim 1 or 2, wherein:

3 said permissible transmission capacity is periodically  
4 updated.

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4. A mobile communication system implementing a data communication by transmitting data through a wireless line and a wired line in accordance with a packet system, comprising:

a wherein a practical transmission speed of said data in said wireless line is measured in every call, a transmission capacity required for transmitting said data of the transmission speed through said wired line at the minimum level is determined as a target transmission capacity in said every call, a transmission capacity demanding signal for decreasing a permissible transmission capacity is transmitted in the case where said permissible transmission capacity usable for transmission of said data through said wired line and determined in said every call is larger than said target transmission capacity, and said transmission capacity demanding signal for increasing a permissible transmission capacity is transmitted in the case where the permissible transmission capacity is smaller than said target transmission capacity;

a relay station wherein said transmission capacity demanding signal is received from said radio base station to change said permissible transmission capacity set up inside the station in said every call to control the transmission speed of said data in said wired line so as to be equal to or less than said permissible capacity and at the same time, to transmit the transmission capacity demanding signal; and

a mobile switching station wherein said transmission capacity demanding signal is received from said relay station to change, in said every call, said permissible transmission

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28 capacity set up inside the station in said every call to control  
29 the transmission speed of said data in said wired line so as to  
30 be equal to or less than said permissible transmission capacity.

1 5. A mobile communication system implementing a data  
2 communication by transmitting data through a wireless line and  
3 a wired line in accordance with a packet system, comprising:  
4 a wherein an practical transmission speed of said data in  
5 said wireless line is measured in every call, a transmission  
6 capacity required for transmitting said data of the transmission  
7 speed through said wired line at the minimum level is determined  
8 as a target transmission capacity in said every call, a  
9 transmission capacity demanding signal for decreasing a  
10 permissible transmission capacity is transmitted in the case  
11 where a difference between said permissible transmission  
12 capacity usable for transmission of said data through said wired  
13 line, which is determined in said every call, and said target  
14 transmission capacity is larger than a predetermined first  
15 threshold, and said transmission capacity demanding signal for  
16 increasing a permissible transmission capacity is transmitted  
17 in the case where a difference between the permissible  
18 transmission capacity and said target transmission capacity is  
19 smaller than a predetermined second threshold;

20 a relay station wherein said transmission capacity  
21 demanding signal is received from said radio base station to  
22 change said permissible transmission capacity set up inside the  
23 station in said every call to control the transmission speed of  
24 said data in said wired line so as to be equal to or less than

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25 said permissible capacity and at the same time, to transmit the  
26 transmission capacity demanding signal; and  
27 a mobile switching station wherein said transmission  
28 capacity demanding signal is received from said relay station  
29 to change said permissible transmission capacity set up inside  
30 the station in said every call to control the transmission speed  
31 of said data in said wired line so as to be equal to or less than  
32 said permissible transmission capacity.

1 6. A mobile communication system as claimed in claim 4 or  
2 5, wherein:

3 said radio base station measures periodically said  
4 transmission speed to determine said permissible transmission  
5 capacity, and transmits said transmission capacity demanding  
6 signal as occasion demands.

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